



An analysis of the Pacific Maritime Security Program and the insufficient treatment of the illegal, unregulated and unreported fishing activities in Papua New Guinea.

How does the Pacific Maritime Security Program respond to the illegal, unregulated and unreported fishing activities in Papua New Guinean waters?

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ROYAL AUSTRALIAN NAVY

SEA POWER

SOUNDINGS



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Introduction

The seed of the Papua New Guinea Defence Force (PNGDF) was in the Australian Army land forces of the Australian territory of Papua and New Guinea as the Pacific Islands Regiment in 1973. In 1975, Papua New Guinea (PNG) gained independence as a State and the Defence Force was established. The historical bond between the two nations is still active today and will remain, as seen from the commitment by Australia to PNG over the years. Since the PNGDF is relatively small, it does not have the three separate armed forces of Navy, Army and Air Force. Rather, the PNGDF is a single tri-service incorporating the elements of the Defence Force – Land, Maritime, and Air.

Presently, Australia continues to take the leading role as the major sea power of the Western Pacific Region under the Defence Cooperation Program (DCP). As a part of the DCP, the Pacific Maritime Security Program (PMSP) is the successor program of the successful Pacific Patrol Boat Program (PPBP). The significant achievement by the island nations during the PPBP has encouraged the continuation of a secure and stable region into this next program. Papua New Guinea is a beneficiary of this program. The program is of great value to our nation as it has provided the assets and related mechanisms to protect our maritime sovereignty and security.

One of the threats to the fishing industry is illegal, unregulated, and unreported (IUU) fishing. This paper considers the Pacific Maritime Partnership and speaks especially to the insufficient treatment offered to the problem of IUU fishing.

The paper proceeds in five parts. Firstly, the paper offers a review of the PMSP. Touching on points identified as strategically significant in the PMSP, this overview reveals the insufficient attention which is given to IUU fishing. Secondly, the paper explains the importance of fish to PNG. Thirdly, it details the span of Maritime Task by reference to Booth's Trinity, and explains that the largest of the PNG Maritime Element (ME) tasking is constabulary operations. The section describes these operations. Fourthly, the paper explains why it matters that PNG stamps out IUU fishing, and explains that by such an endeavour PNG is working to secure maritime security and good order in the region. Finally, the paper sets out recommendations.

1. The PNGDF Maritime Element and the review of the Pacific Maritime Security Program

1.1 Points of strategic significant in the PMSP

The Pacific Maritime Security Program (PMSP) is a comprehensive package of capability, infrastructure, sustainment, training and coordination designed to increase regional maritime security for Pacific Island nations and Timor-Leste. The program builds on the original Pacific Patrol Boat Program and will see an uninterrupted 60 year commitment of deeper-level engagement in the Pacific. The PMSP is a commitment of AU\$2 billion over 30 years and consists of three components:

- new Guardian-class patrol boats
- region-wide integrated aerial surveillance
- enhancements to regional coordination.



Under the program, Australia is delivering 21 Guardian-class patrol boats to 12 Pacific Island nations and Timor-Leste between 2018 and 2023.¹ The Australian Government is also considering options for a dedicated vessel to support increased engagement with our partners in the Pacific.

To date, September 2021, Australia has delivered 13 vessels to PNG, Tuvalu, Tonga, Samoa, Solomon Islands, Fiji, Vanuatu, Palau, and Kiribati. In addition, Australia is contributing to the redevelopment of the Lombrum Naval Base.

The early works phase commenced in 2020 and that includes the refurbishment of the community chapel, construction of a new medical facility, upgrades to the communication centre, and construction of security fencing. The main works had commenced in early June 2021 and includes electrical generation services for Lombrum Naval Base and Manus Island, water and sewerage services for the base, facilities for PNG Defence Force for work, training and living accommodation, and operational facilities for the Guardian-class patrol boats and small boat operations.²

1.2 The PMSP first component rollout – the Guardian-class patrol boat

The boat is an upgrade and improves capability compared to the Pacific class.

Figure 1 shows the characteristics and capability of the new boat.³

<i>Class overview</i>	
<i>Name</i>	Guardian class
<i>Builders</i>	<u>Austal</u>
<i>Operators</i>	13 nations
<i>Preceded by</i>	<u>Pacific class</u>
<i>Built</i>	2018–present
<i>Planned</i>	21
<i>General characteristics</i>	
<i>Type</i>	<u>Patrol boat</u>
<i>Length</i>	39.5 m (129 ft 7 in)
<i>Beam</i>	8 m (26 ft 3 in)
<i>Draft</i>	2.5 m (8 ft 2 in)
<i>Propulsion</i>	2 × Caterpillar 3516C diesels, 2 shafts
<i>Speed</i>	20 <u>knots</u> (37 km/h; 23 mph)
<i>Range</i>	3,000 nautical miles (5,600 km; 3,500 mi) at 12 knots (22 km/h; 14 mph)
<i>Complement</i>	23
<i>Armament</i>	Australia shipped the vessels complete, except for weapons, but the design is capable of mounting machine guns and a main armament of an autocannon of up to 30 mm



1.3 Other components of PMSP

Further to the Guardian-class patrol boat, the PMSP has implemented two other key points: improved aerial surveillance and enhanced regional cooperation.

Concerning aerial surveillance, the PMSP will build upon existing aerial surveillance capabilities and introduce a contracted civilian-manned fixed-wing aircraft to be implemented from 2017. The improved aerial surveillance will become available to all existing PMSP partners and will seek to improve defence against illegal maritime activities in the region.⁴

The PMSP will also focus its efforts to enhance regional cooperation. Outlined in the Defence Sub-Committee report, the Regional Coordination Working Group agreed for additional funding to be awarded to recipients undertaking regional cooperation under the PMSP Regional Coordination funding line.⁵ This initiative provides incentives for recipient states conducting regional cooperation exercises such as Operation Kurukuru 2020 where 12 Guardian-class and Pacific-class patrol boats from Pacific nations operated alongside five French Navy and United States Coastguard vessels.

1.4 The Forum Fisheries Agency (FFA) as the operations facilitator and coordinator of PMSP

The FFA coordinates the surveillance operation which spans 21.3 million square kilometres, the Exclusive Economic Zones (EEZ) of 15 Pacific Island member states and adjacent high seas pockets.⁶ The Pacific Islands Forum Fisheries Agency is the intergovernmental agency established in 1979 to facilitate regional cooperation and coordination on fisheries policies between its member states in order to achieve conservation and optimum utilisation of living marine resources, including highly migratory fish stocks, for the benefit of the peoples of the region, in particular the developing countries. Currently there are five regional patrols facilitated and coordinated by FFA.

1.5 The existence of IUU fishing in our region

As the demand for fish in the Asian market increases, so the value of fish increases. This has caused an influx of Asian fishers heading down the Western and Central Pacific Ocean (WCPO). The involvement of organised crime in IUU fishing is entirely predictable. As demand increases and supplies dwindle, the corresponding rise in profits further explains the allure of IUU fishing. Also, the vastness of the seas makes prosecution of the law unlikely. The result is a low-risk, high-reward environment perfectly tailored to the interest of criminal actors.⁷

1.6 Inadequate number of patrol days

Maritime patrols must be consistent, thorough and frequent to keep a good watch over our EEZ. However, at the present time, regional patrol boats deploy for only 14 days in every three months. This leaves 295 days – which is 85% of the days in a year – without patrols being conducted.

1.7 The Guardian-class patrol boat operational capability

Like the Pacific class, the Guardian-class patrol boat is rated for a maximum speed of 20 knots. But, unlike the Pacific class, the Guardian class is unarmed. Guardian-class boats should have been fitted



with an autocannon. However, no armament was agreed by the PNGDF and the ADF for a contractor to install the weapon, though the boat is designed to accept fitment of a cannon.

An update on this matter was sought from the PNG Defence Advisor in Canberra dated 1 September 2021.⁸ He stated that the Australian Defence Organisation (ADO) has agreed to arm the PNGDF Guardian patrol boats. This was as per the request by the PNGDF Commander Major General Gilbert Toropo. Additionally, the Guardian Class Armament Governance Board has been established. The first meeting of this board was scheduled for 17 September 2021 to discuss user requirements for the armaments of the boats with the ADO. The expectation is that the third PNG boat will be armed prior to being delivered at the end of 2021. The Guardian-class patrol boat armament and training will be managed by the Governance Board from 17 September onwards.

1.8 The patrol boat's Boarding Officers' lack of knowledge about fisheries legislation

Over the past years, PNGDF Maritime Officers were attending the Fisheries Course at the Australian Maritime College, Tasmania, under the Pacific Patrol Boat Project. Since there were only two spaces for each island nation per year, not all the PNG patrol boat Boarding Officers received the training.

Regrettably, officers from the Landing Craft Base in Port Moresby were selected. Currently, no Boarding Officers serving with the Patrol Boat Squadron has attended any Fisheries or related course. An example is during Op Rai Balang in 2020, when a local licensed purse seiner was boarded in the Bismarck Sea. The fisher had a valid fishing licence; however, he did not comply with one of the conditions of the licence, which stipulates four PNG nationals are to be part of the crew. The point is, when such details as this are misperceived as minor infringements, or as no infringement at all, then there is no prosecution. But, frankly, it's not worth doing 20 to 30 boardings with not even a single infringement discovered and reported.

2. The importance of fish to Papua New Guinea

Like any other Pacific Island countries, local communities rely heavily on fish as a daily meal, either be it breakfast, lunch or dinner. Indeed, on any ordinary day it is estimated that about eight out of ten families in a particular village eat a meal sourced from the sea. In this part, I will discuss the value of fish to the local people as a part of normal meals, the important of fish as a source of income-earning opportunity, and the large-scale fishing industry.

2.1 The value of fish to the local coastal inhabitants

The majority of the people in PNG live a subsistence life. This means they grow their own food and hunt in the forest or fish in the sea to sustain their daily life. It is the normal routine in life. Coastal communities rely on the sea as the source to gather food, especially fish. Fish is consumed by nearly every family in a meal. The methods they use for fishing might be traditional or modern. Fish is bartered with other garden food or vegetables amongst the communities or between the inland people. In modern times excess fish caught by locals is sold within the villages or in the nearest smaller town market for cash. The cash is then used to buy other food or items needed to keep and sustain village life.



A small income-earning opportunity

When fishing with modern equipment, there is a good chance to catch fish beyond the need of subsistence. These excess fish are sold to local town markets to earn cash. Some locals are employed in fish processing facilities. Others are employed as sailors by the local fishing companies or observers onboard properly regulated foreign fishing vessels (FFV). Some locals near main ports exchange local fresh vegetables or fresh produce with properly regulated FFV bycatch, especially smaller skipjack tuna. These small tuna are then prepared and sold at local town markets.

Coastal fisheries add an important socio-economic value to the coastal communities in PNG, where the bulk of coastal fisheries production is attributed to subsistence use and consumed locally. The value of these fisheries is often not considered in national development planning and accounting. Estimates of coastal and subsistence fisheries catches are difficult to derive but the study from Gillett (2009) provides some indicative figures that highlight the value of coastal subsistence compared to coastal commercial fisheries.⁹

The estimation of PNG's aggregate annual production in US dollars in 2014 by the Food and Agriculture Organization (FAO) is presented in the figure below.

Coastal Fisheries Commercial Production:	US \$26,176,800
Coastal Fisheries Subsistence Production:	US \$34,357,050
Total Production Value:	US \$60,533,850

Figure 2: Estimate of coastal fisheries production (FAO 2014)

Potential for commercialising other key coastal fisheries resources needs to be explored.

2.2 The fishing Industry

Two PNG fisheries attract foreign fishing companies: tuna and beche-de-mer. The tuna fishery is uninterrupted, whereas beche-de-mer (sea cucumber) is seasonal, roughly every three years. These two fisheries are the main attraction for illegal boats encountered by the PNG patrol boats within the PNG EEZ.

Tuna fishery

Papua New Guinea has an EEZ of 2.4 million square kilometers. Tuna is found throughout the PNG fisheries zone but especially to the north and east. As tuna are a migratory species moving from area to



area depending on climatic conditions, the quantity found in the PNG EEZ may vary significantly from year to year.

Tuna is the largest fishery in PNG and represents a balance of both domestic industry development and foreign access arrangements. The fishery is primarily for skipjack and yellowfin, with smaller quantities of bigeye and albacore.

Annual catch is usually about 150,000mt to 200,000mt per year but it is estimated that the resource can sustain annual catches of 250,000mt to 300,000mt. The potential market value is about one billion Papua New Guinea Kina (PGK) depending on the commodity price. Catch from PNG waters accounts for 20–30% of the regional catch and is about 10% of the global catch. In the recent past, catch trend by vessel category has changed, such that 50% is now caught by vessels associated with on-shore investments in PNG and the other 50% is caught by foreign purse-seine vessels.¹⁰

Tuna is exported in the form of fresh chilled, canned, fishmeal and frozen tuna products. Chilled tuna is air freighted to the sashimi market in Japan. Frozen tuna is exported to the Philippines and Taiwan. Canned tuna is exported to the USA, Germany and Great Britain and small quantities to the Melanesian Spearhead Group countries. Fishmeal is exported to Australia and Japan. Export value of all tuna products is now about US\$400 million. This excludes catch by foreign vessels that pay access fees and take fish to overseas processors. Aside from the export value it is estimated that more than 10,000mt of canned tuna is sold locally in PNG per year.¹¹

Beche-de-mer

On average, 630 tons of beche-de-mer is exported annually to markets in Hong Kong, China, Singapore, Vietnam and Malaysia. Over 60% of the catch is re-exported to mainland China. The beche-de-mer fishery contributes significantly in terms of export revenue for the country and income generation for more than half a million Papua New Guineans. The fishery is the second biggest export earner for PNG after tuna and contributes US\$50 million of export revenue. About US\$27 million goes directly to coastal and island communities annually. The income generated from the beche-de-mer fishery that goes directly to men, women and children in the coastal and island communities is significant and lasts for the duration of the four-month fishing season. The monthly income makes up a significant proportion of annual income direct to families and is the single most important fishery that contributes the highest income directly to the coastal and island people of PNG. The value of this fishery to the coastal and island communities is estimated at US\$6.75 million per month across PNG.¹²

On 22 December 2016, patrol boat HMPNGS *Seeadler*, whilst enroute from Port Moresby to Manus Island, received intelligence reports of confirmed sightings of illegal boats in the Milne Bay province waters. After nearly 24hrs of steaming, *Seeadler* sighted the contacts and confirmed with an aerial patrol plane. A total of three Vietnamese Blue Boats were caught. The boarding operation continued for hours with hot pursuit and dangerous manoeuvres in the open seas. This resulted in one of the Blue Boats



sunk. Onboard the other two apprehended illegal boats were a total of 15 full drums (200 liters) of salt-preserved beche-de-mer.

At about the same time, two Vietnamese Blue Boats were caught: one in Lyrra Reef, New Ireland province by fishers on a local licensed fishing boat, and the other in Milne Bay province's outer islands reef by local people. The locals used their machetes to apprehend the illegal fishers.

Other resources

The other fisheries for export are prawns, lobsters and crabs which also bring revenue in the industry. Additionally, fisheries resources of significant community or national interest include aquarium species, trochus, barramundi, black bass, deep water snapper, squid, mackerel and other near shore species. These resources are dominant and abundant within the coastal and near shore regions, offering opportunities for further exploration.

3. The span of PNGDF Maritime Element task

The Maritime Element has one of the two naval bases. Lombrum Naval Base (HMPNGS *Tarangau*), located on Manus Island, is home to the Patrol Boat Squadron. It is currently in the transition period of the phased out Pacific-class patrol boats to the now Guardian-class boats. This squadron currently has two of the Guardian-class boats and is yet to receive another two.

3.1 The PNGDF Maritime Element core tasks

Following the PNGDF Maritime Standard Operating Procedures,¹³ the core roles of the Patrol Boat Squadron are:

1. To undertake the enforcement of national maritime laws including those relating to resource protection
2. To conduct routine patrols throughout the PNG maritime areas to protect the country's sovereignty and to extend the influence of the government into remote maritime areas
3. To maintain a ready capability for assistance in suppression of civil disorders in remote areas, civil disaster relief and for search and rescue at sea
4. To contribute to the collection of intelligence
5. To contribute towards securing against seaborne infiltration of coastal waters of PNG.

3.2 Main tasks expected by PMSP

Over time the threat and security climate has changed. The Pacific Maritime Security Program Patrol Boat Operations Manual 2018¹⁴ reflects the progress of threat profiles and the evolving role of the new Guardian-class patrol boat. This is to ensure that all official documentation is same and understandable in the region and especially through the FFA who will be facilitating and coordinating the Regional Surveillance operations.



The expanding roles of the Guardian-class patrol boats are:

1. Conduct sovereignty patrols in the PNG EEZ coordinated with aerial surveillance (when available), including vessel boarding, search and seizure, targeting transnational crime and higher threat activities
2. Integrating representatives from other government agencies to enable interdictions and boardings
3. Conduct regional fisheries patrols with other participating nations coordinated by FFA
4. Conduct maritime search and rescue
5. Conduct short-notice humanitarian assistance and disaster relief (HADR) response operations throughout PNG and overseas, including evacuation, transport of stores and equipment, and command and control
6. Conduct regional international goodwill and representational visits
7. Conduct nation-building activities.

3.3 The Ken Booth Trinity

The PNGDF Maritime Element itself intends to do all the tasks required of any other larger state's navy; however, at a very minimal level. Basically, larger navies use the sea in the three roles identified by Ken Booth in 1977.¹⁵

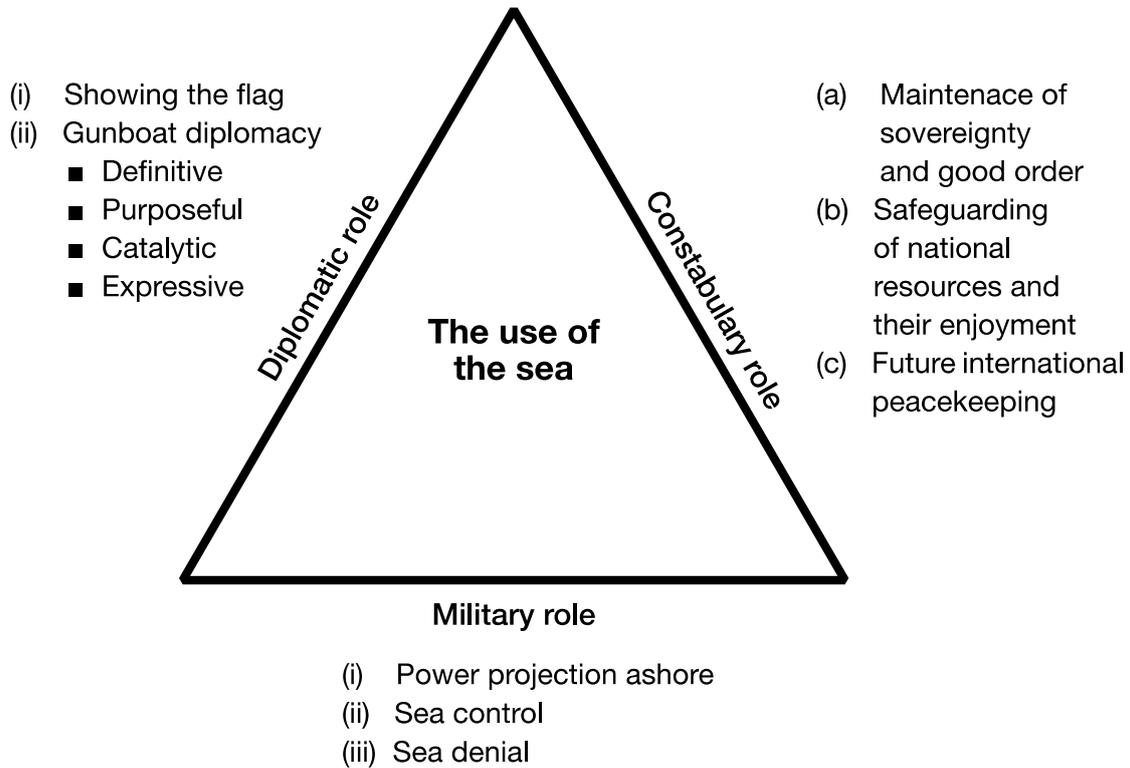


Figure 3: Trinity roles by Ken Booth. Source: Booth 1977

3.4 The Booth Trinity helps us to interpret the roles of the PNGDF

1. Military role

The physical presence of the PNGDF patrol boats alone in high seas within the country’s EEZ asserts PNG sovereign claims. Though the platform is small, the patrol boat stands for the sovereign State. One of the primary roles of the Patrol Boat Squadron is to conduct patrols throughout the PNG EEZ to protect and to assert the rights of the nation and the citizens of PNG. An example of such a successful operation was done by one of the PNG patrol boats HMPNGS *Moresby* on 22 August 2020. When on patrol in the northeastern waters, they came across a foreign vessel, unnamed, unlicensed and



unregistered, fishing illegally inside PNG's EEZ. The vessel was challenged for her identification but was not cooperating. After all attempts were exhausted to try to communicate with the foreign vessel, including warning shots, it refused to stop. Eventually shots were fired into the wheelhouse and wounded a crew member. The illegal vessel finally was stopped, and the eight crew members surrendered. It was discovered that the vessel was Chinese with a crew of various Asian nationals. The vessel was brought to the nearest port for medical assistance and further investigation. The Police transnational crime unit later confirmed that the same vessel was engaged in previous incidents of drug smuggling.

2. Diplomacy role

In implementing the diplomacy role, the Maritime Element had been conducting annual naval exercises with the Royal Australian Navy (RAN). Successful over the last 15 years, Exercise Paradise is conducted with each nation serving as the exercise host. The exercises are conducted in various locations in PNG and in Cairns and Darwin. In this naval exercise these two maritime forces share professional training and experiences. They aim at enhancing interoperability and cooperation.

In addition, two of our Pacific-class patrol boats sailed 6,000 nautical miles to Padang, Indonesia, in 2016 for its Naval Review celebration and took part in the Multilateral Naval Exercise Komodo 2016 (MNEK). Another two patrol boats sailed from Port Moresby to Sydney to take part in the RAN Naval Review on 13 October 2013. These are examples of diplomacy roles by the PNGDF Maritime Element in representing the nation in the naval use of the sea.

Over the past 15 years, I have observed that most of the PNGDF spending on the Maritime Element operations is on bilateral naval exercises with the RAN. Comparing exercises with surveillance patrols, the Maritime Element hardly funds its own patrols.

3. Constabulary role

Nearly all surveillance patrols conducted by the PNGDF Maritime Element were funded by the National Fisheries Authority (NFA) to uphold the laws of the nation. These are constabulary duties. Practically, the patrol boats provide the platform and the boarding teams. In each patrol, an NFA enforcement officer is embarked as a subject matter expert to enforce the compliance of fisheries legislation in the high seas. High seas patrols are usually fisheries compliance boardings. Some of the tasks are checking fishing licences, investigating possible licence infringements, checking fish holds, checking stock log sheets, and checking for bycatch. Additionally, the boarding party does a physical crew check of passports to eliminate human trafficking. For those local FFV, with local crew and NFA observers onboard, we usually interview them to ensure they are treated well, and that they are safe onboard.

3.5 Regional Maritime Operations – Western Pacific

The main task of the Maritime Element is the constabulary role in assisting to enforce the national fisheries legislation in the high seas. By doing so PNG stands among Pacific Island States that share a



common interest in protecting vital resources – the sea and its fisheries. The Pacific Islands FFA provides monitoring, control and surveillance (MCS) activities, policies and services, for members to strengthen national capacity and regional solidarity to prevent, deter and eliminate IUU fishing in the Pacific. There are five regional patrols facilitated and coordinated by FFA in the Regional Head Office in Honiara, Solomon Islands. These are operations Rai Balang, Tui Moana, Island Chief, Big Eye and Kurukuru, in this order, within a year.

The Patrol Boat Squadron, since taking up the first Guardian-class patrol boat in November 2018, HMPNGS *Ted Diro*, did her first regional patrol during the FFA coordinated Operation Island Chief 2019. During this operation aerial surveillance was conducted on the second 10-day patrol. Two RAAF King-Air light aircraft were used. Fortunately, it was arranged that *Ted Diro* command teams were involved in the aerial reconnaissance patrol. Upon the sightings of fishing concentrations and their locations, the command team recommended a change to the original patrol plan which was the best idea. A change to the patrol plan was executed and a total of 33 high seas boardings were conducted in 37 sightings during the patrol. Last year, during Operation Rai Balang 2020, *Ted Diro* apprehended three licensed purse seiners and a tanker north of Manus Island for illegally bunkering in high seas.



Images 1 and 2: FFV tanker at anchorage in Seeadler Harbor, Manus Island.

4. Why it matters that PNG stamps out IUU fishing

Illegal, unreported and unregulated fishing can be a direct and indirect security threat to PNG and the Western Pacific Region. IUU fishing can affect PNG's national security in two ways. As described by Poling and Cronin (2017),¹⁶ IUU fishing can directly encourage illegal networks engaged in maritime crimes such as smuggling of weapons, illegal drugs, narcotics and human trafficking – the nontraditional security threats to the nation. Secondly, it can damage our food security and local livelihoods, creating conditions, which serve to encourage organised crime, piracy and armed insurgency in our maritime region. Compounding both the direct and indirect security threat is the fact



that IUU fishing will reduce government revenues in coastal states, reducing their ability to confront these and other challenges.

The Government of PNG does not condone illegal fishing in any form. This commitment has been given in correspondence between the Prime Minister of PNG, Peter O'Neill, and the European Union, demonstrating unequivocal political support at the highest level.¹⁷

IUU fishing is a recognised global problem which undermines the integrity of responsible fisheries management arrangements and results in lost value to coastal states. Previous studies have shown that the effects of IUU fishing are often hardest felt in developing coastal states heavily reliant on fishing for income.¹⁸

IUU fishing takes money out of the pockets of governments in coastal and small island developing states that could otherwise be used for social services, infrastructure, and other necessary spending.¹⁹ At the same time, it undercuts local livelihoods, leading to economic displacement and desperation. The combination of these effects directly undermines stability and security, and indirectly contributes to the spread of threats from nonstate actors.²⁰

IUU fishing is often undertaken by distant-water fleets with which local fishers cannot compete commercially. And regardless of who is doing the fishing, IUU fishers undercut local and international efforts to ensure fishing is done sustainably. The Food and Agriculture Organization estimated that in 2013 almost 90% of global fish stocks were either being overfished at biological unsustainable levels or were fully fished with no room for increased production.²¹ IUU fishing, which accounts for an estimated 20% of global catches, is a major contributor to this problem.²² Over the long term it drives down the fish stocks, making it more and more difficult for local communities to secure enough catch for their own needs, much less to sell for profit. And this burden falls disproportionately on those least able to endure it.²³

4.1 IUU in the Western and Central Pacific Ocean

The definition of IUU as set out in the FAO International Plan of Action (IPOA) – IUU is included below.²⁴

WHAT IS IUU FISHING?

Illegal fishing refers to fishing activities:

- (1) conducted by national or foreign vessels in waters under the jurisdiction of a State, without the permission of that State, or in contravention of its laws and regulations;
- (2) conducted by vessels flying the flag of States that are parties to a relevant regional fisheries management organization but operate in contravention of the conservation and management measures adopted by that organization and by which the States are bound, or relevant provisions of the applicable international law; or



(3) in violation of national laws or international obligations, including those undertaken by cooperating States to a relevant regional fisheries management organization.

Unreported fishing refers to fishing activities:

- (1) which have not been reported, or have been misreported, to the relevant national authority, in contravention of national laws and regulations; or
- (2) undertaken in the area of competence of a relevant regional fisheries management organization which have not been reported or have been misreported, in contravention of the reporting procedures of that organization.

Unregulated fishing refers to fishing activities:

- (1) in the area of application of a relevant regional fisheries management organization that are conducted by vessels without nationality, or by those flying the flag of a State not party to that organization, or by a fishing entity, in a manner that is not consistent with or contravenes the conservation and management measures of that organization; or
- (2) in areas or for fish stocks in relation to which there are no applicable conservation or management measures and where such fishing activities are conducted in a manner inconsistent with State responsibilities for the conservation of living marine resources under international law.

IUU fishing and other activities that undermine the fisheries management frameworks have the potential to significantly erode the benefits to the Pacific Island people associated with the harvest of oceanic fisheries. And PNG is no exemption to this. A report submitted on MCS in 2009²⁵ for the Pacific Region oceanic fish stocks, especially tuna and tuna-like species, identified six strategic risk areas.

1. *Risks associated with external pressure on shared common stocks undermines regional fisheries management goals.* The over-fishing of yellowfin tuna (YFT) and big eye tuna (BET) in Southeast Asia undermines the sustainability of the regional stocks. Compounding the consequence of over-fishing is the inadequate effort in monitoring and reporting of Southeast Asian fleets, which undermines data integrity and stock assessments, and the over-fishing of BET in the Eastern Pacific Ocean (EPO) undermines sustainable management of Western and Central Pacific Ocean (WCPO) stocks.
2. *Risks associated with excess capacity or effort in licensed fleets undermines regional fisheries management goals.* The excess capacity in the long-liners (LL) vessels is likely and has a major consequence and high-risk rating. Moreover, the excess effort in the PS fishery in BET and YFT sectors is almost certain, with a moderate consequence. Its risk rating is severe.
3. *Risks associated with non-compliance by licensed vessels and flag states.* This occurs during fishing in high seas pockets. It is likely to be done by both LL and PS and the consequence is moderate with a high risk rating. Similar risks in this category are the catch discard in the PS fleet, the non-compliance with Vessel Monitoring System (VMS) provisions, the use of non-prescribed gear, fishing inside closed waters, falsification/misuse of licence documents, fishing



with FADs during closure periods, and misreporting of target species. The latter one is almost certain as it will occur both by the LL and PS. The consequences are serious, and the risk rating is severe. Other risks in the category include the misreporting of bycatch species, misreporting set type in the PS fishery, misreporting catch position, failure to provide prompt entry/exit/weekly reports, and the inadequate reporting by flag states.

4. *Risks in the post-harvest supply chain.* The inadequate monitoring and control of the post-harvest supply chain undermines regional fisheries management goals. The illegal transshipping between purse seiners, fresh product vessels and deep-water freezer vessels occurring in high seas has a moderate likelihood and major consequences. The risk rating is high.

4.2 Discussion

Outlined below is a summary of the key outcomes from the six key assessment results above in MRAG's *Safeguarding the Stocks* report (2009).

Risks exist across the geographical range of stocks and throughout the supply chain. Areas of high risk occurred in each of the six strategic risk areas identified by the assessment, including throughout the full geographical range of target stocks – for example, overfishing by East Asian domestic fleets in the west and the incursions by unlicensed purse seiner vessels in the east – and throughout the supply chain; for example, under-reporting of catch at the catching vessel level to illegal transshipping and weaknesses associated with landing catches in foreign ports downstream. The broad scale and diverse nature of the risks, together with the interconnectedness of stocks within the region, argues for a comprehensive and inclusive approach to the development of regional monitoring, control and surveillance approaches.²⁶

Some of the highest risks to stocks occur outside the FFA area of interest. Some of the highest risks to the achievement of FFA members' regional fisheries goals occur on shared stocks harvested outside the FFA area of interest, most notably as a result of overfishing by domestic fleets in Southeast Asia.²⁷

Non-compliance by licensed vessels is a key risk area. Unlike some other parts of the world in which IUU fishing appears to be dominated by large unlicensed fleets (e.g., West Africa), most high-risk areas of non-compliance identified in this assessment were associated with licensed vessels and fleets. While the state of information available to the assessment is insufficient to make definitive conclusions, when taken as whole, there is a strong case to be made that IUU activities by licensed vessels (and non-compliance with reporting obligations – see below) is likely to represent a greater risk to the achievement of regional goals than unlicensed activity.²⁸

Inadequate reporting is a risk area. Of the various forms of non-compliance associated with licensed fleets, failure to comply with reporting obligations was identified as the highest risk grouping. Access



to timely and accurate catch, effort and other data is central to achieving regional fisheries goals, and weaknesses in current compliance were identified across the spectrum of reporting obligations.

Misreporting (including under-reporting) of target species was rated as severe inherent risk in both the PS and LL fisheries, although stronger MCS arrangements in the PS fishery (100% observer coverage, greater inspection coverage) resulted in a moderate residual rating. Virtually all FFA members interviewed in country identified misreporting or under-reporting of target species as a key compliance concern and their evidence is supported by data showing that ‘not reporting in vessels logs or weekly reports’ and ‘not reporting catches of commercial species’ was reported on 31% and 43% of trips respectively in the PS fishery and 24% and 39% respectively in the LL fishery. Non-compliance with catch reporting obligations in the LL fishery is of particular concern given its potential to undermine catch reduction targets.

Unlicensed fishing remains a threat to some areas and fleets.

While most high-risk areas identified by assessments centered on authorised fleets, unlicensed fishing remains a risk in some areas and fleets. Unlicensed incursions by small-scale southeast Asian vessels are a locally significant issue in the PNG and Palau EEZs. Evidence provided by both fisheries and enforcement officials in PNG and Palau indicated that small-scale Asian based vessels were routinely seen on surveillance patrols in areas adjacent to the Indonesia–PNG EEZ boundaries, while reports were also received from industry in PNG of pump boats (Photos 2 and 3 below) and purse seine support vessels regularly fishing illegally in the Bismarck Sea. As Southeast Asian fisheries continue to decline while demand and prices for marine products increase, the frequency of incursions may increase substantially.²⁹



Images 3 and 4: Two of the Indonesian pump boats apprehended in the PNG–Australia–Indonesia border during Operation Kurukuru 2020. Source: MPNGS *Ted Diro* crew

The highest risk of unlicensed fishing vessels migrating from other ocean basins appears to be PS vessels moving across from the EPO. Several EPO PS vessels have been prosecuted in recent years and



considerable anecdotal evidence was received during in-country interviews to suggest higher levels of illegal activity than that detected and prosecuted by authorities..

Excess capacity in an environment of weak monitoring, control and surveillance (MCS) is a key driver of risk. Over-capacity is a complex issue on which there is a range of often competing views within the FFA region. On the one hand, excess capacity may increase competition for legitimate access rights and push up access fees, delivering an economic benefit for FFA members. On the other, overcapacity in the absence of adequate controls to limit fishing mortality may result in unsustainable impacts on stocks, and in the absence of effective MCS arrangements to ensure adherence to control measures may act as a key driver of non-compliance. From an MCS point of view, both issues have relevance to the development of the Regional MCS Strategy and were evident to some extent during this assessment.

A range of risks to bycatch species exist. Based on the evidence available, the impact of LL fisheries for tuna and likely species of sharks appears to one of the highest risk areas. Sharks regularly make up a larger proportion than the target species and MCS arrangements to monitor catches are currently weak. Rates of observer coverage are generally very low and under-reporting of catch appears to be a widespread problem. For turtles, the residual risk was rated moderate in the tropical shallow set LL fishery. Notwithstanding that, there is a pressing need to improve our understanding of bycatch rates and species compositions in the LL fisheries by improving rates of observer coverage.

5. Recommendations

Outlined below are recommendations on what measures need to be taken to effectively reduce the IUU fishing in PNG. It can be inclusive to our adjacent neighbouring island nations as well.

5.1. Increase aerial surveillance in the north

Evidence has proved that aerial surveillance during individual and regional operations is an effective way of identifying FFV within each nation's EEZ. The identification and locating of vessels in high seas gives direct information to the patrol boats for the options of tracking and boarding or moving on to other contacts within the area.

The current arrangement in utilising aircraft has limitations for the task requirements especially in larger EEZs. Considering a surveillance satellite might be quite expensive, an appropriate solution would seem to be the use of Unmanned Aerial Vehicles in the northern waters. This will be affordable and serve its purpose with less limitations.

5.2 The PNG Government decisions on the future of the fisheries industry

The demand for fish is increasing every year as the population increases, and the Asian market price for fish is gradually rising with demand for a constant supply of fishery products. The Papua New Guinea Government must not be short sighted and shallow minded in accepting fisheries industry deals



from Asian companies; however, conservation and sustainment of fisheries up to the territorial waters is vital to the coastal livelihood of Papua New Guineans.

5.3 Funding from economically developed nations

Pacific island nations are developing countries. Funding assistance for the purpose of economic development or repaying debts is needed for them to pursue their nations' interests. These island nations will look to the economically powerful nations from the north for financial assistance. When urgent financial support is needed, inconsiderate decisions are sometimes made. But the deep and consequential risk of predatory economics is unseen.

5.4 Fisheries legislative knowledge for high-seas compliance boarding

The Fisheries Officers course, once taught at the Australian maritime College, Launceston, as part of the patrol boat program, needs to be reviewed, improved and taught in our current institution at TAFE in Cairns. This means the syllabus taught must conform to the real lessons learnt and experience gained over the years. From the above MCS survey report, the risks outlined are mostly in the licensed vessels. The fisheries infringement laws in IUU fishing identified in this report must be understood by the FFA. The FFA will then provide information and teaching lessons to mitigate these infringements to be included in the Fisheries Officers course syllabus in Cairns.

5.5 A complementary high seas MCS regime is needed to support in-zone arrangements

A strategic risk exists in the development of stronger and more effective in-zone MCS arrangements: the IUU fishing and other activities that undermine regional goals will be pushed into adjacent areas of the high seas. As a result, there is a need for complementarity and support between in-zone and high seas MCS arrangements. While still in its infancy, WCPFC has made considerable progress on establishing an effective MCS regime. Key measures include a comprehensive record of fishing vessels and a process of IUU listing, a centralised VMS and a world-first high seas boarding inspection regime.

Conclusion

The Pacific Maritime Security Program is the successor of the previous program which it has improved and includes the donation of the new patrol boats, an aerial surveillance program, and the regional coordinated patrols facilitated and coordinated by the FFA in the region. The Program is designed to enhance regional cooperation to assist the smaller Pacific island nations to protect their maritime resources and their sovereignty. Fish are the major resource in each nation.

Fish are important regardless of who we are and where we come from. Fish is consumed in subsistence living for survival, or caught in large stocks which involves foreign companies or States for economic production and international trade. All these island nations get government revenue through the fisheries industry.



It is *not the unlicensed vessels* that are the main threat to IUU fishing in the region. It is the *licensed foreign fishing vessels* that are the culprits that we need to closely monitor. We do not have to look further than the fishing fleets we already have. The balance of probabilities suggests that illegal / unreported fishing by licensed vessels is likely to be a more significant problem than illegal fishing by vessels unlicensed anywhere in the region.

The regional cooperation program initiated by Australia in the Pacific region must be seen as a duty of care to the smaller Pacific island nations. It must be valued and appreciated. The PNG Government must realise that most of its financial struggle to buy capabilities, especially ships (in our case, the four Guardian-class patrol boats and the redevelopment of Lombrum Naval Base) had been made possible by the government of Australia. PNG should embrace the assistance and help itself to support and sustain this existing program where required.

Endnotes

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